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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/487,593	01/19/2000	Shinya Matsuoka	063170.8255(19970008-DIV)	3339

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EXAMINER	
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ART UNIT	PAPER NUMBER
2151	

NOTIFICATION DATE	DELIVERY MODE
10/22/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	09/487,593	MATSUOKA, SHINYA	
	Examiner	Art Unit	
	Khanh Dinh	2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 August 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *26-30 and 32-49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *26-30 and 32-47* is/are rejected.

7)☒ Claim(s) *48, 49* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

ETAILED ACTION

1. This is in response to the Amendment and Remarks filed on 8/7/2007. Claims 26-30, 32-47 and new claims 48 and 49 are presented for examination.

Claim Rejections - 35 USC § 112

2. Claims 26-30, 32-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 26 and 44, Applicant claims "..relative position..". The term "relative" in claims is a relative term which renders the claims indefinite. The term "relative" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 26-30 and 32-37, 39-42, 44-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruno et al U.S. pat. No. 5,710,591 in view of Cohen et al, IEEE 1993, "Virtual gain for audio windows."

As to claims 26 and 29, Bruno discloses an audio conference server (ACS) method comprising:

receiving real time (MCU 26 fig. I) audio data from source of audio client (exchanging /recording audio information during an audio conference call, see abstract, fig. I and col. I lines 29-51 and col.4 line 54 to col.5 line 40). Bruno does not specifically disclose attenuating the received real time audio data and stored audio data associated with a point source based on sound decay characteristics to stimulate relative positions of the source audio client, the point source and a target audio client and each source audio client is assigned a selected decay function from a plurality of predefined decay functions. However, Cohen discloses attenuating the received real time audio data and stored audio data associated with a point source based on sound decay characteristics to stimulate relative positions of the source audio client, the point source and a target audio client (the distance-dependent gain parameter used in MAW (moving source/moving sink), see Cohen's section 1.2, distance dependent-gain and fig.3), delivering attenuated audio data to target or source audio client (transferring data to multiple audio resources, see page 85, section 0.1) and each source audio client is assigned a selected decay function from a plurality of predefined decay functions

(transferring data to multiple audio resources and letting listeners later parameters among teleconferees using size and source dependent gains as functions, see pages 85-88). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize Cohen's attenuated data mixer in Bruno's audio conference server to control the volume of a sound source and a listener because it would have allowed multiple simultaneous audio sources to coexist in a modifiable display without user stress (see Cohen's section 0.1).

As to claim 27, Bruno discloses the target audio client is the same as the source audio client (see col.4 line 44 to col.5 line 40).

As to claim 28, Bruno discloses the target audio client is different than the source audio client (see col.5 line 33 to col.6 line 46).

As to claim 30, Bruno discloses the source audio clients, target audio clients and the point source are displayed as points on a viewing screen from which sound seems to emanate (see col.6 lines 1-46).

As to claim 32, Bruno discloses the PSA includes point source includes audio data from a user input (see fig.2, col.6 line 47 to col.7 line 38).

As to claim 33, Bruno discloses the source audio client comprises a set-top box (STB) audio client that originates from an audio conferencing user (see col.7 lines 1-64).

As to claim 34, Bruno discloses the STB including a set-top application for controlling audio data from a microphone *or* to a speaker (see co1.5 lines 8-67 and col.7 lines 27-64).

As to claim 35, Bruno discloses the target audio client comprises a set-top box (STB) audio client that originates from an audio conferencing user (see col.5 lines 8-67 and col.7 lines 27-64).

Claim 36 is rejected for the same reasons set forth in claim 34.

As to claim 37, Bruno discloses a plurality of audio clients and a plurality of target audio clients participate in an audio conference (see co14 line 44 to co1.5 line 32).

As to claims 39 and 40, Cohen further discloses attenuating comprises identifying a respective decay factor for each source audio client and for each point source and the decay factor is a customized decay factor (see Cohen's section 1.2 and fig.3). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize Cohen's attenuated data mixer in Bruno's audio conference server to control the volume of a sound source and a listener because it would have allowed

multiple simultaneous audio sources to coexist in a modifiable display without user stress (see Cohen's section 0.1).

As to claims 41 and 42, Cohen further discloses determining a respective values between the point source, the source audio client and the target audio client based on the decay factors identified with the point source and the source audio client (see Cohen's section 1.2 and fig.3) and attenuating further comprising calculating a mix for the point source, the source audio client and the target audio client using the weighted values (i.e., calculating clients' parameters, see Cohen's section 0.1). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize Cohen's attenuated data mixer in Bruno's audio conference server to control the volume of a sound source and a listener because it would have allowed multiple simultaneous audio sources to coexist in a modifiable display without user stress (see Cohen's section 0.1).

Claim 44 is rejected for the same reasons set forth in claim 26.

As to claim 45, Cohen further discloses the decay factor is a customized decay factor (see Cohen's section 1.2 and fig.3). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize Cohen's attenuated data mixer in Bruno's audio conference server to control the volume of a sound source and a

listener because it would have allowed multiple simultaneous audio sources to coexist in a modifiable display without user stress (see Cohen's section 0.1).

As to claims 46 and 47, Bruno discloses a plurality of point sources are present in an audio conference and at least a potion of the stored audio data is associated with the source audio client (commencement of an audio conference call, see col.7 lines 5-64 and col.8 lines 10-50).

5. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bruno and Cohen as applied to claim 26 above, and further in view of Nelson et al., US pat. No.5,452,447.

Neither Bruno nor Cohen discloses using an Interface Definition Language (IDL) to delete, add participants. However, the use of IDL software is generally well known in the art as disclosed by Nelson (see col.6 lines 25-62). It would have been obvious to one of the ordinary skill in the art at the time the invention was made to implement a well-known software such as IDL in the system of Bruno to add or delete participants in the ACS because it would have requested a creation of an object, to perform remote procedure calls in a client-server network environment (see col.6 lines 25-62).

6. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bruno and Cohen as applied to claim 26 above, and further in view of Everett US pat. No.5,864,816.

Bruno and Cohen's teachings still applied as in item 4 above. Neither Bruno nor Cohen discloses selecting one from the group consisting of: a fade in/fade out function, floating point operation, steam audio. However, Everett discloses selecting one from the group consisting of: a floating point operation elimination function (see 40 of fig.2) to avoid the performance of floating point multiplication (identifying scale factor functions to determine the excess of a predetermined threshold, see co1.2 lines 30-63, col.4 lines l 0-54) and a stream data function to prepare stream audio (MPEG streams) for playing ambient background music or using an audio source forwarded from another conference (see fig. 1, col.3 lines 20-65). It would have been obvious to one of the ordinary skill in the art at the time the invention was made to Everett's teachings into Braun's audio system to facilitate the mixings of data streams because it would have facilitated the mixings of audio data in compressed forms.

Allowable Subject Matter

7. Claims 48 and 49 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed on 8/7/2007 have been fully considered but they are not persuasive.

- Applicant asserts that the term "...relative positions..." is not properly rejected under 35 U.S.C 112.

Examiner respectfully disagrees. Applicant's argument is not persuasive since the Applicant has not provided any portion in the instant applications' specification to clarify the meaning of the term. Examiner respectfully maintain the rejection since the term "relative" in claims is a relative term which renders the claims indefinite. The term "relative" is also not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

- Applicant asserts that the cited reference does not disclose "receiving real time audio data from source of audio client and attenuating the received real time audio data and stored audio data associated with a point source based on sound decay characteristics to stimulate relative positions of the source audio client".

Examiner respectfully disagrees. Examiner respectfully point out that the combination of Bruno and Cohen still discloses the Applicant claimed invention, For example, Bruno discloses an audio conference server (ACS) method comprising: receiving real time (MCU 26 fig. I) audio data from source of audio client (exchanging /recording audio information during an audio conference call, see abstract, fig. I and col. I lines 29-51 and col.4 line 54 to col.5 line 40). Bruno

does not specifically disclose attenuating the received real time audio data and stored audio data associated with a point source based on sound decay characteristics to stimulate relative positions of the source audio client, the point source and a target audio client and each source audio client is assigned a selected decay function from a plurality of predefined decay functions. However, Cohen discloses attenuating the received real time audio data and stored audio data associated with a point source based on sound decay characteristics to stimulate relative positions of the source audio client, the point source and a target audio client (the distance-dependent gain parameter used in MAW (moving source/moving sink), see Cohen's section 1.2, distance dependent-gain and fig.3), delivering attenuated audio data to target or source audio client (transferring data to multiple audio resources, see page 85, section 0.1) and each source audio client is assigned a selected decay function from a plurality of predefined decay functions (transferring data to multiple audio resources and letting listeners later parameters among teleconferees using size and source dependent gains as functions, see pages 85-88). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize Cohen's attenuated data mixer in Bruno's audio conference server to control the volume of a sound source and a listener because it would have allowed multiple simultaneous audio sources to coexist in a modifiable display without user stress (see Cohen's section 0.1).

As a result, cited prior art does disclose an audio conferencing method, as broadly claimed by the Applicants. Applicants clearly have still failed to identify specific claim limitations that would define a clearly patentable distinction over prior art.

Conclusion

9. Claims 26-30, 32-47 are rejected.

10. Claims 48 and 49 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Dinh whose telephone number is (571) 272-

3936. The examiner can normally be reached on Monday through Friday from 8:00 A.m. to 5:00 P.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung, can be reached on (571) 272-3939. The fax phone number for this group is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Khanh Dinh

KHANH DINH
PRIMARY EXAMINER
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